

ABSTRACT

A method for fabricating a magnesium alloy billet for a thixoforming process capable of enhancing the mechanical properties of a forming product by inducing plastic deformation of an AZ91D magnesium alloy included extrusion and compression and forming a fine recrystallized microstructure from a primary solid phase through an isothermal holding process by a 'strain induced melt activated process.' In the case in which the magnesium alloy fabricated according to the present invention is adapted to a material used for a power train part, a chassis part or an interior part of a vehicle, it is possible to fabricate a part having a thick region and a region with a complicated shape. Such a fabrication is impossible in the conventional die casting process.